

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 07 JUL 2005

Applicant's or agent's file reference	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/EP2004/006087	International filing date (day/month/year) 04.06.2004	Priority date (day/month/year) 18.06.2003
International Patent Classification (IPC) or national classification and IPC C11D3/40, C11D3/00		
Applicant UNILEVER PLC		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 15.12.2004	Date of completion of this report 08.07.2005	
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Bertran Nadal, J Telephone No. +31 70 340-3924	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/006087

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-36 as originally filed

Claims, Numbers

1-11 received on 15.12.2004 with letter of 09.12.2004

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☒ the claims, Nos. 1-11
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 1-12 partially
because:
 - ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☒ no international search report has been established for the said claims Nos. 1-12 partially
 - ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
 - ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
 - ☐ See separate sheet for further details

**INTERNATIONAL PRELIMINARY REPORT
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International application No.
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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	4, 6, 7, 10 (partially), 15 (complete)
	No: Claims	1-3, 5, 8, 9, 11, 12 (partially), 13, 14 (complete)
Inventive step (IS)	Yes: Claims	
	No: Claims	1-12 (partially), 13-15 (complete)
Industrial applicability (IA)	Yes: Claims	1-12 (partially), 13-15 (complete)
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item I

Basis of the report

The amendments filed with the letter dated 09.12.2004 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendments concerned are the following: in claim 1:

(1) for providing a visual perception of whiteness to cotton: the passage on page 2 last paragraph of the application as filed refers to a visual perception of whiteness, but it does not refer to cotton;

(2) a photostable blue acid dye or a violet acid dye: the application as originally filed refers to red and blue acid dyes (cf. page 2 lines 27 and 28) and to dyes having a blue and/or violet shade (the passage on page 6 lines 5 and 6 refers). In the application as filed there is only support for blue acid dyes and violet acid dyes having the structure according to original claim 14 and page 7 line 1.

Further to the added subject-matter, claim 1 as filed with letter dated 09.12.2004 would also not meet the requirements of Article 6 PCT because it is not clear: it refers to a particulate laundry detergent composition (i.e. a solid detergent composition) having a pH of from 7 to 11. Therefore, Items III and V of the present International Preliminary Report are based on claims 1-15 as originally filed.

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claims 1-12 relate to a composition comprising a dye, which is defined by reference to a desirable characteristic or property, namely a substantivity to non-mercerised cotton in a standard test of at least 8% but a substantivity to nylon of less than 5%.

The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims

also lack clarity (Article 6 PCT). An attempt is made to define the compound by reference to a result to be achieved.

Furthermore, the parameter of present claim 1 is measured under unclear conditions: the inorganic non-surfactant salt (iii) is not defined, and the agitation is only characterized by the time.

The attention of the Applicant is drawn to the fact that the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the compounds referred to in claims 13, 14 and 15. In the present Report, the reasoned statement under Item V refers only to the subject-matter for which the International Search Report has been established. The parts of the claims relating to inventions in respect of which no International Search Report has been established need not to be the subject of an International Preliminary Examination (Rule 66.1(e) PCT).

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 The following documents are referred to in this communication:

D1 : GB 1 247 189 A

D2 : DATABASE CHEMICAL ABSTRACTS, XP002294233, AN 120:137730

2 INDEPENDENT CLAIM 1

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses a composition for the treatment of natural or synthetic fibres, in particular for the cleansing or care thereof, comprising a surfactant and a dye (cf. D1 page 1 lines 10-13, 37-46). In example 5 on page 5 lines 114-115, the use of orange dye (C.I. 15510) is disclosed. In view of the results shown in tables 1 and 5 of the present

application, it appears that the orange dye falls within the scope of the present application. The subject-matter of claim 1 is therefore not new.

Document D2 discloses a softening composition for fabrics comprising a combination of surfactants and a dye, namely 10 ppm of C.I. Acid Blue 29 (cf. D2 Abstract). The subject-matter of claim 1 is therefore not new.

3 DEPENDENT CLAIMS 2-15

Dependent claims 2-15 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).

- 3.1 The features of dependent claims 2, 3, 5, 8, 9 and 11-14 have already been employed for the same purpose in a similar composition, see document D2.
- 3.2 In claims 4, 6, 7, 10 and 15 a slight change in the composition of claim 1 is defined which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen.

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CLAIMS

1. A particulate laundry detergent composition, for providing a visual perception of whiteness to cotton, having a pH of from 7 to 11, which comprises a surfactant and from 0.0001 to 0.02 wt% of a photostable blue acid dye or a violet acid dye which has a substantivity to non-mercerised cotton in a standard test of at least 8% but has a substantitivity to nylon of less than 5%, wherein the standard test involves a solution of dye being prepared such that the solution has (i) an optical density of 1 (5 cm pathlength) at the maximum absorption of the dye in the visible wavelengths, (ii) a sodium lauryl alkyl benzene sulphonate surfactant concentration of 0.3 g/l, (iii) inorganic non-surfactant salt concentration of 1.1 g/l, (iv) under wash conditions of a liquor to cloth ratio of 45:1, temperature of 20°C, soak times of 45 minutes, and an agitation time of 10 minutes.
2. A particulate laundry detergent composition as claimed in claim 1, wherein the dye has a peak absorption wavelength on cotton of from 550nm to 650nm.
3. A particulate laundry detergent composition as claimed in claim 1, wherein the dye comprises a combination of dyes which together have the visual effect on the human eye as a single dye having a peak absorption wavelength on cotton of from 550nm to 650nm.

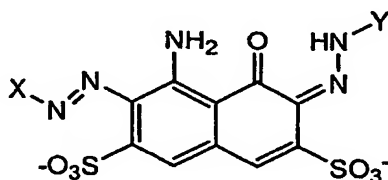
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4. A particulate laundry detergent composition as claimed in any preceding claim, which comprises from 0.0005 to 0.01 wt% of the dye.

5 5. A particulate laundry detergent composition as claimed in any preceding claim, wherein the dye is selected from acid red 17, acid blue 29, acid black 1 or mixtures thereof.

10 6. A particulate laundry detergent composition as claimed in claim 1 wherein the dye is selected from the group comprising blue and violet acid dyes of structure



15 where at least one of X and Y must be an aromatic group, preferably both, the aromatic groups may be a substituted benzyl or naphthyl group, which may be substituted with non water solubilising groups such as
20 alkyl or alkyloxy or aryloxy groups, X and Y may not be substituted with water solubilising groups such as sulphonates or carboxylates.

25 7. A particulate laundry detergent composition as claimed in claim 1 wherein the dye is selected from the group comprising red acid dyes of structure

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5 where B is a naphthyl or benzyl group that may be substituted with non water solubilising groups such as alkyl or alkyloxy or aryloxy groups, B may not be substituted with water solubilising groups such as sulphonates or carboxylates.

10 8. A particulate laundry detergent composition as claimed in any preceding claim, wherein the surfactant is a non-soap surfactant.

15 9. A particulate laundry detergent composition as claimed in claim 8, wherein the surfactant is an anionic or cationic surfactant.

20 10. A particulate laundry detergent composition as claimed in claim 9, wherein the surfactant is an anionic surfactant, preferably C₈-C₁₅ linear alkyl benzene sulphonate.

25 11. A particulate laundry detergent composition as claimed in any preceding claim, which comprises from 5 to 60 wt% of surfactant.